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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/965,013	09/27/2001	Patrick Joseph Bohrer	AUS920010312US1	2760

44994 7590 08/03/2005

IBM CORPORATION (DWL)
C/O LALLY & LALLY, L.L.P.
P. O. BOX 684749
AUSTIN, TX 78768-4749

EXAMINER

AILES, BENJAMIN A

ART UNIT	PAPER NUMBER
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2142

DATE MAILED: 08/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/965,013

Applicant(s)

BOHRER ET AL.

Examiner

Benjamin A. Ailes

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-7,9-15 and 17-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-7,9-15 and 17-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This application has been assigned to a new Examiner. Please see the Conclusion section for new contact information.
2. Claims 1, 3-7, 9-15, and 17-23 remain pending.

Drawings

3. Applicant's amendments to the drawings filed 16 May 2005 have been entered into the record. The drawings objection has been withdrawn.

Specification

4. Applicant's amendments to the specification filed 16 May 2005 have been entered into the record. The specification objection has been withdrawn.

Claim Objections

5. Applicant's amendments to the claims filed 16 May 2005 have been entered into the record. The claims objection has been withdrawn.
6. Claim 23 is objected to due to minor informalities. The claim is missing a period (.). Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. Applicant's amendments to the claims filed 16 May 2005 have been entered into the record. The 112, 1st rejection to claim 1 has been withdrawn.
8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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9. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

10. Claim 3 recites the limitation "effective data rate" in line 2 of the claim. There is insufficient antecedent basis for this limitation in the claim. In order to further prosecution, Examiner assumes the limitation is intended to state "effective data rate". Appropriate correction is required.

Response to Arguments

11. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

13. Claims 1, 3-7, 9-15, 17-19, and 21-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Chawla et al. (U.S. 6,876,668), hereinafter referred to as Chawla.

14. Regarding claim 1, Chawla discloses a method of operating a data processing network, comprising:

performing an initial negotiation between a server of the network and a switch to which the server is connected, wherein the initial negotiation establishes an initial operating frequency of a link between the server and the switch (col. 5, lines 20-25 and col. 12, line 61 – col. 13, line 4);

determining an effective data rate of the server based on network traffic communicated over the link (col. 12, line 61 – col. 13, line 4); and

responsive to determining that the effective data rate is different than a current bandwidth of the link, performing a subsequent negotiation to establish a modified operating frequency, wherein the modified operating frequency is closer to the effective data rate than the initial operating frequency (col. 13, lines 20-24)

wherein the modified operating frequency is the lowest operating frequency accommodated by the link that is sufficient to handle the effective data rate (col. 12, lines 12-17, col. 13, lines 20-30).

15. Regarding claim 3, Chawla discloses the method further comprising, repeating, at specified intervals during the operation of the network, the determination of the effective data rate and the contingent initiation of a subsequent negotiation (col. 13, lines 20-27).

16. Regarding claim 4, Chawla discloses the method wherein the initial and subsequent negotiation are compliant with the IEEE 802.3 standard (col. 11, lines 25-36, Chawla discloses the use of wireless networks, IEEE 802.3 is considered just an example of a wireless network).

17. Regarding claim 5, Chawla discloses the method wherein determining the effective data rate includes accumulating information indicative of the amount of network traffic during a specified interval and calculating an effective data rate based thereon (col. 13, lines 20-27).

18. Regarding claim 6, Chawla discloses the method further comprising, responsive to determining that the effective data rate is greater than a specified percentage of the current bandwidth, performing a subsequent negotiation to establish a modified operating frequency, wherein the modified operating frequency is higher than the current operating frequency (col. 13, lines 10-20).

19. Claims 7 and 15 contain similar subject matter and are rejected under the same rationale as claim 1.

20. Claims 9 and 17 contain similar subject matter and are rejected under the same rationale as claim 3.

21. Claim 10 contains similar subject matter and is rejected under the same rationale as claim 4.

22. Claims 11 and 18 contain similar subject matter and are rejected under the same rationale as claim 5.

23. Claims 12 and 19 contain similar subject matter and are rejected under the same rationale as claim 6.

24. Regarding claim 13, Chawla discloses the network wherein the initial and subsequent negotiations are initiated by the central switch (col. 13, lines 31-44).

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25. Regarding claim 14, Chawla discloses the network wherein the initial and subsequent negotiations are initiated by the server device (col. 13, lines 31-44).

26. Regarding claim 21, Chawla discloses a computer program product comprising:
instructions for detecting that the link is underutilized including instructions for determining that a current bandwidth of the link is greater than an effective data rate of the link (col. 4, lines 14-17 and col. 13, lines 10-20); and

instructions for responding to said detecting by reducing an operating frequency of the link (col. 4, lines 14-17 and col. 13, lines 10-20, Chawla discloses an environment wherein a client's bandwidth can be either increased or decreased. Chawla discloses an embodiment wherein a bandwidth is increased due to a client needing a faster operating link. It is clear that this example could be performed in the opposite direction, wherein the client's bandwidth would be decreased.).

27. Regarding claim 22, Chawla discloses the computer program product further comprising instructions for determining the effective data rate of the link, wherein the effective data rate is indicative of an amount of data traversing the link during a specified interval (col. 13, lines 20-27).

28. Regarding claim 23, Chawla discloses the computer program product further comprising:

instructions for detecting that the link is over-utilized include instructions for determining that a current bandwidth of the link is less than an effective data rate of the link (col. 13, lines 20-24); and

instructions for responding to said detecting that think link is over-utilized by increasing an operating frequency of the link (col. 13, lines 27-30).

Claim Rejections - 35 USC § 103

29. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

30. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

31. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chawla in view of Choi et al. (U.S. 6,661,803), hereinafter referred to as Choi.

32. Regarding claim 20, Chawla discloses the connection of a client to a server switch and the ability to adjust the bandwidth on the connection dynamically, however does not explicitly disclose the bandwidth being controlled specifically by a clock and clock signals. However, Choi discloses a system wherein a network switch includes a control signal method which controls bandwidth allocation and adjustment (see col. 6,

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lines 1-6). One of ordinary skill in the art at the time of the applicant's invention would have found it advantageous to combine the method of adjusting bandwidth dynamically between a client and a server switch as disclosed by Chawla and the method of controlling bandwidth through the use of control signals and clock signals, as disclosed by Choi. One of ordinary skill in the art would have been motivated to make such a combination because clock signals are commonly used in the art, as disclosed by Choi, and because Chawla and Choi are highly related in the networking arts, due to the fact that they both disclose the desire to control the bandwidth of a connection (see Chawla, col. 13, lines 20-30 and Choi, col. 6, lines 1-14).

Conclusion

33. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Rollins (U.S. 6,738,348) discloses a bandwidth on demand subscriber system.

Pogrebinsky et al. (U.S. 2002/0044528) disclose a flow control method and apparatus.

Moran, III et al. (U.S. 6,377,552) disclose a system, device, and method for evaluating dynamic range in a communication system.


Mukai et al. (U.S. 2002/0085492) disclose apparatus for outputting a signal, a method for outputting the signal, and a computer-readable storage medium storing a computer-executable program for operating a computer to output the signal.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin A. Ailes whose telephone number is (571) 272-3899. The examiner can normally be reached on M-F 7:30-5, First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on (571) 272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-3800.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

baa


BEATRIZ PRIETO
PRIMARY EXAMINER